The Risk-Revealing Effect of Audit Quality on Corporate Financial Risks -An Empirical Test Based on Panel Data of A-Share Listed Companies

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Abstract: Against the backdrop of the deep integration of the digital economy and regulatory technology, audit governance has become a core mechanism for corporate risk prevention and control. However, the complexity of financial risks faced by A-share listed companies stands in stark contrast to the limitations of traditional audit models. This study focuses on audit quality and, based on panel data from A-share listed companies from 2018 to 2023 (all data sourced from the CSMAR database), investigates its impact on corporate financial risks and the underlying mechanisms. Using the entropy method, we construct a comprehensive audit quality index (encompassing three dimensions: audit assurance quality-i.e., audit opinion; firm reputation and scale-i.e., whether the firm is one of the Big Four or among the top ten domestic accounting firms; and audit input level-i.e., audit fees) to empirically test main effects, mediating effects, and heterogeneity effects. The results indicate that audit quality plays a significant risk-disclosure role and is significantly negatively correlated with firms' book financial risk indicators; earnings management mediates this relationship, with audit quality revealing firms' true financial risks by curbing earnings management; this risk-disclosure effect exhibits significant heterogeneity, being more pronounced in non-state-owned enterprises and highly marketized regions. This study enriches research on the economic consequences of audit quality and provides references for corporate risk prevention and control as well as regulatory policy formulation.

Keywords: Audit Quality; Corporate Financial Risk; Risk Disclosure Effect; Earnings Management

1. Introduction

Against the backdrop of escalating demands for risk prevention and control in capital markets and the development of the digital economy, audit quality-as a core component of corporate governance-has become a crucial safeguard for corporate financial risk management. However, the limitations of traditional audit models in addressing complex financial risks have become increasingly apparent. Additionally, China's unique institutional environment results in situational heterogeneity in the effectiveness of audit quality, necessitating systematic research. Establishing a multidimensional audit quality evaluation system tailored to Chinese practices, and verifying its impact pathways and heterogeneous characteristics on corporate financial risks, has become a dual imperative for both academia and practice.

This study holds significant theoretical and practical implications. Theoretically, it enriches interdisciplinary research on the economic consequences of audit quality and corporate risk governance, refines the theoretical analytical framework of "audit quality–intermediary mechanisms–financial risk," optimizes the dimensions of audit quality measurement, and expands the application boundaries of relevant theories by providing localized empirical support; On the practical level, it can serve as a reference for listed companies to optimize audit investments and for regulatory authorities to strengthen industry oversight. Furthermore, it can provide tailored audit quality improvement strategies for different enterprises and regions, thereby promoting the standardized development of the audit industry and the high-quality operation of the real economy.

This study focuses on the risk-revealing effects of audit quality on financial risks of A-share listed companies. Specifically, it will construct a multidimensional comprehensive evaluation system for audit quality, empirically test the negative correlation between the two, reveal the mediating mechanism of earnings management, and analyze the heterogeneous effects resulting

from ownership structure and marketization levels. The study will employ panel data models to test main effects, mediating effects, and heterogeneity effects, supplemented by robustness tests to ensure the reliability of the results. Additionally, it will specify the CSMAR database as the data source, establish sample selection criteria, and construct a scientific variable measurement system.

This study offers three innovative contributions: in terms of perspective, it overcomes the limitations of existing research that focuses on direct effects by constructing an "audit quality–earnings management–financial risk" analytical framework, and analyzes heterogeneity characteristics from the dual dimensions of property rights nature and marketization level within the Chinese institutional context; in terms of methodology, it adopts a combined empirical strategy of "two-way fixed-effects models + stepwise regression + group-based regression" to cross-validate research conclusions through multiple methods; In terms of conclusions, the study clarifies the risk-disclosure effect of audit quality and the mediating role of earnings management. It also reveals differentiated findings indicating that this effect is more pronounced in non-state-owned enterprises and highly marketized regions, providing precise references for the targeted formulation of audit optimization and regulatory policies.

2. Literature Review and Research Hypotheses

2.1 Research on Audit Quality

(1) Definition and Measurement of Audit Quality

The core definition of audit quality revolves around the professional competence and independence of auditors, This core logic also establishes the foundation for measuring audit quality. Subsequent scholars have continuously expanded its measurement dimensions based on different research contexts. Overseas studies have extended this to include the application of auditing techniques, process standardization, and report reliability, while domestic research, in conjunction with China's local context, has constructed a comprehensive evaluation index encompassing audit opinion types, the degree of earnings management suppression, and the standardization of audit processes, and has further incorporated the dimension of data governance compliance to optimize the measurement framework. Existing audit quality measurement methods are primarily divided into single-indicator and composite-indicator approaches. The former typically selects indicators such as auditor characteristics [1], audit opinion types, and audit fees [2], while the latter constructs evaluation systems by integrating multi-dimensional indicators, thereby providing a more comprehensive reflection of audit quality levels. However, existing measurement systems still suffer from limited adaptability, as they rarely combine China's audit industry practices to construct composite indices based on three core dimensions: audit assurance quality, firm reputation and scale [3], and audit input levels to construct a comprehensive index, and the practicality and accuracy of these measurements remain to be improved.

(2) Determinants of Audit Quality and Economic Consequences

In international research, Becker et al. (1998) confirmed that the "Big Four" firms, due to resource and brand constraints, exhibit significantly higher audit quality than non-Big Four firms; Lennox (2000) found an "inverted U-shaped" relationship between audit tenure and audit quality [4]. In domestic research, Fang Junxiong (2009) confirmed that high audit quality can reduce corporate financing costs; Liu Qiliang et al. (2013) found that improved audit quality can curb opportunistic behavior among executives. The economic consequences of audit quality are primarily reflected in the optimization of corporate governance, reduced financing costs, and the alleviation of information asymmetry, providing crucial support for corporate risk prevention and control.

2.2 Research on Corporate Financial Risks

Corporate financial risk refers to various uncertainties related to financial activities faced by enterprises during their operations, primarily encompassing dimensions such as credit risk, liquidity risk, and market risk. Foreign studies have proposed the Z-Score model as a classic tool for measuring comprehensive corporate financial risk and have further developed multidimensional corporate financial risk measurement systems [5]; domestic research, however, points out that the financial risks of

Chinese listed companies exhibit industry heterogeneity and policy sensitivity, and that the volatility of financial risks in non-state-owned enterprises is significantly greater than that in state-owned enterprises.

Regarding the influencing factors of corporate financial risk, existing research explores multiple internal and external dimensions. Foreign studies confirm that firm size and profitability are negatively correlated with financial risk, while institutional environments such as investor protection serve as key external constraints affecting corporate financial risk; domestic research, meanwhile, finds that improvements in corporate governance and the quality of information disclosure can effectively reduce corporate financial risk. Research on the multifaceted influencing factors of corporate financial risk provides multiple perspectives for analyzing the mitigating effect of audit quality on corporate financial risk.

2.3 Research on the Impact of Audit Quality on Corporate Financial Risk

Existing research has conducted preliminary explorations of the direct relationship between audit quality and corporate financial risk. Foreign studies suggest that audit quality can reduce information asymmetry through its supervisory role, thereby influencing risk disclosure [6], and that high audit quality can effectively identify earnings manipulation and reveal a firm's true financial risk level [7]; Domestic studies, based on A-share market data, have confirmed a negative correlation between audit quality and corporate book financial risk indicators, demonstrating that audits conducted by high-quality accounting firms can more fully reveal potential financial risks. While these studies provide foundational evidence for the risk-revealing effect of audit quality, further exploration of the underlying mechanisms and heterogeneous characteristics between the two is still needed [8].

Regarding studies on intermediary effects, both domestic and international research indicate that earnings management is a key means by which firms conceal financial risks

3. Empirical Results and Analysis

3.1 Descriptive Statistics

Table 1. presents the descriptive statistics for the main variables.

Table 1. Descriptive Statistics for Main Variables

Variable Name	Sample Size (N)	Mean	Standard Deviation (SD)	Minimum (Min)	Maximum (Max)
Z_Score	23,524	6.472	8.157	-0.518	50.318
AQ	23,524	0.001	0.000	0.000	0.002
Lev	23,524	0.408	0.198	0.057	0.885
Size	23,524	22.260	1.325	19.960	26.290
ROE	23,524	0.035	0.169	-0.966	0.334
Growth	23,524	0.164	0.435	-0.592	2.871
Cash	23,524	0.187	0.136	0.010	0.672
Top1	23,524	33.580	14.590	8.640	73.180
SOE	23,524	0.271	0.445	0.000	1.000
Market	23,524	8.560	1.840	3.540	12.150

3.2 Regression Analysis of Main Effects

To examine the impact of audit quality on corporate financial risk, this study employs a two-way fixed-effects model for regression analysis, controlling for year and industry effects. Table 2 reports the results of the baseline regression.

Column (1) shows that the regression coefficient for the core explanatory variable, audit quality, is -1,887.547 and is significant at the 1% level (t-value of -2.61). This indicates a significant negative correlation between audit quality and the book Z-score. Higher audit quality is associated with a lower Z-score, indicating higher financial risk.

Regarding the control variables, the coefficient for the debt-to-equity ratio is -16.610, which is significantly negative, consistent with the theoretical expectation that higher financial leverage implies greater bankruptcy risk (lower Z-scores); the coefficient for return on equity is 2.593, which is significantly positive, indicating that stronger profitability leads to greater financial security for the firm.

Table 2. Results of Main Effect Tests

Variable	(1) Z_Score
AQ	-1887.547*** (-2.61)
Lev	-16.610*** (-25.32)
Size	-0.680*** (-3.45)
ROE	2.593*** (7.84)
Growth	0.325*** (3.12)
Cash	5.412***

	(10.25)
Top1	0.015** (2.14)
_cons	56.634*** (12.58)
Year FE	YES
Ind FE	YES
N	23,524
R-squared	0.225

Note: Values in parentheses are t-statistics; ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

3.3 Testing for Mediating Effects

To explore the specific mechanism through which audit quality influences corporate financial risk, this study introduces earnings management as a mediating variable.

Table 3 presents the results of the mediating effect tests. Column (1) presents the baseline regression, showing a significant negative overall effect. Column (2) tests the effect of audit quality on the mediating variable, revealing that audit quality effectively curbs earnings management behavior. Column (3) includes both variables in the model, and the coefficient for audit quality remains significant.

The results indicate that audit quality reduces corporate window-dressing of financial statements by "curbing earnings management," thereby exposing hidden risks and fulfilling a governance function.

Table 3. Results of the Mediation Analysis

Variable	Total effect Z_Score	Mediating effect AbsDA	Direct effect Z_Score
AQ	-1887.547*** (-2.61)	-0.854** (-2.10)	-1654.220** (-2.25)
AbsDA			273.450*** (5.68)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Ind FE	YES	YES	YES
N	23,524	23,524	23,524

3.4 Robustness Tests

To ensure the reliability of the conclusions, this study conducted two robustness tests, the results of which are shown in Table 4.

First, we replaced the dependent variable. In this study, the debt-to-equity ratio was used as a proxy for corporate financial risk. The results in Column (1) show that the regression coefficient of audit quality on the debt-to-asset ratio is 67.155, and it is significantly positive at the 1% level. This implies that higher audit quality is associated with higher levels of disclosed liabilities. This result is highly consistent with the main regression logic: high-quality audits reveal off-balance-sheet liabilities or hidden debt, leading to an increase in the book debt-to-asset ratio, which further corroborates the risk disclosure hypothesis.

Second, the explanatory variable is lagged by one period. Considering that audit governance effects may exhibit time lags and to mitigate endogeneity issues, this study employs lagged audit quality in the regression. The results in Column (2) show that the coefficient for L.AQ is -2,389.421, which remains significantly negative at the 1% level. This indicates that audit efforts in the previous period continue to influence risk disclosure in the current period, demonstrating the robustness of the study's conclusions.

Table 4. Results of Robustness Tests

Variable	Substitute DV (Lev)	One-period lag (L.AQ)
AQ	67.155*** (8.54)	
L.AQ		-2389.421*** (-3.23)
Controls	YES	YES
Year FE	YES	YES
Ind FE	YES	YES
_cons	-0.634***	58.120***
N	23,524	19,845
R-squared	0.185	0.228

3.5 Heterogeneity Analysis

Taking into account differences in ownership structure and the degree of marketization across regions, this study further analyzed the heterogeneity of the audit quality governance effect. The results are shown in Table 5.

Column (1) examines heterogeneity by ownership structure. The coefficient of the interaction term AQ×SOE is 5,085.271, which is significantly positive. Combined with the negative coefficient of the main effect, this indicates that in non-state-owned enterprises, audit quality exhibits a strong "water-squeezing" effect (with a more negative coefficient); whereas in state-owned enterprises, due to implicit guarantees and policy advantages, the pressure for audit quality to reveal risks is relatively low, and it may even exhibit a certain

positive effect.

Column (2) examines heterogeneity under the degree of marketization. The coefficient of the interaction term AQ×Market is -3,817.688, and it is significantly negative. This implies that in regions with a faster pace of marketization, legal regulation is stricter and auditors practice with greater caution; consequently, the role of audit quality in revealing potential corporate risks is stronger, leading to a larger decline in the book Z-Score and the disclosure of higher financial risks.

Table 5. Results of Heterogeneity Analysis

Variable	Adjustment of property rights structure	Adjustment of marketization level
AQ	-3311.593*** (-3.85)	1254.210 (0.85)
AQ × SOE	5085.271*** (3.65)	
AQ × Market		-3817.688** (-2.25)
Controls	YES	YES
Year FE	YES	YES
Ind FE	YES	YES
N	23,524	23,524
R-squared	0.226	0.227

4. Research Findings and Policy Recommendations

4.1 Research Findings

Based on panel data from A-share listed companies from 2018 to 2023, this study constructs a multidimensional audit quality evaluation system and empirically examines the impact of audit quality on firms' book financial risk, as well as the intermediary mechanisms and heterogeneity characteristics involved. The following conclusions are drawn:

Audit quality is significantly negatively correlated with the book financial risk indicators of A-share listed companies; that is, the higher the audit quality, the lower the firm's book Z-Score, and the higher the financial risk revealed, thereby validating the risk-disclosure effect of audit quality. This does not imply that high-quality audits increase a firm's actual financial risk; rather, high-quality audits can identify and curb management's financial window-dressing, squeezing out "water" from financial statements to expose the firm's true financial risk, thereby reflecting the core governance function of auditing as the "gatekeeper" of the capital market.

Earnings management plays a partial mediating role in the negative correlation between audit quality and firms' book financial risk indicators. Improved audit quality effectively curbs firms' earnings management practices, reducing the likelihood that management will conceal true risks by manipulating financial statements. This, in turn, restores the firm's actual financial condition, leading to a decline in book financial risk indicators, thereby revealing the intrinsic transmission mechanism through which audit quality exerts its risk-disclosure effect.

The risk-revealing effect of audit quality exhibits significant heterogeneity. Compared to state-owned enterprises (SOEs), in non-state-owned enterprises (NSEs), higher audit quality is associated with a lower Z-Score, more thorough risk disclosure, and a more pronounced negative correlation. This is because non-state-owned enterprises lack implicit policy guarantees and face greater market oversight pressure, making it easier for audit quality to fulfill its risk-disclosure function. Furthermore, the risk-disclosure effect of audit quality is more pronounced in highly marketized regions than in less marketized ones. This is because the institutional environment in highly marketized regions is more robust, with stronger legal oversight and professional constraints, enabling auditors to more fully fulfill their risk identification and attestation responsibilities.

4.2 Policy Recommendations

(1) Enterprise Level

Emphasize the risk-revealing value of audit quality. Based on the enterprise's ownership structure and the level of marketization in its region, optimize the selection of audit partners, giving priority to high-quality accounting firms such as the Big Four and the top ten domestic firms [9]. Reasonably increase investment in audit resources to identify potential financial risks through high-quality audits and prevent the accumulation of risks caused by financial window-dressing. At the same time, standardize corporate financial disclosure practices, reduce the scope for earnings management, proactively disclose the true financial condition, and enhance the transparency of corporate operations [10].

(2) Regulatory Level

Improve regulatory policies for the audit industry,

strengthen the risk-disclosure orientation of audit quality, establish an audit quality evaluation system centered on "risk identification and attestation," and increase penalties for audit failures and the condoning of earnings management. This will compel accounting firms to improve audit quality and fully leverage the risk-disclosure function of audits.

Develop differentiated audit regulatory policies tailored to regions with varying ownership structures and levels of marketization [11]. Strengthen audit oversight of state-owned enterprises (SOEs), guiding them to recognize the value of audit risk identification and reduce discrepancies in financial disclosures; increase support and regulation for the audit industry in regions with low marketization, improve local institutional environments and professional constraints, elevate the overall audit quality in such regions, and promote the balanced realization of audit risk disclosure effects.

Strengthen supervision of corporate earnings management, improve financial disclosure standards, clarify the criteria for identifying earnings manipulation and the corresponding penalties, and reduce corporate practices of concealing financial risks through window-dressing at the source [12], thereby forming a synergistic regulatory force with high-quality auditing.

(3) Industry Level

Strengthen self-regulation within the audit industry, promote the standardized development of accounting firms, enhance the cultivation of auditors' professional competence and ethical standards, improve auditors' ability to identify earnings management and disclose corporate risks, establish mechanisms for sharing audit quality best practices within the industry, and guide audit firms to continuously optimize their audit procedures.

Promote the differentiated development of audit services by addressing the heterogeneous characteristics of different contexts. For non-state-owned enterprises and firms in highly marketized regions, focus on enhancing audit capabilities in risk identification and the suppression of earnings management; for state-owned enterprises and firms in regions with low marketization, strengthen the attestation and regulatory functions of audits, and gradually improve the risk disclosure effectiveness of audit quality.

Research Limitations and Future ProspectsThis study still has certain limitations: First, although the audit quality measurement utilizes data from the CSMAR database to construct a three-dimensional evaluation system, it does not incorporate dimensions such as individual auditors' professional competence or audit tenure, leaving room for improvement in the comprehensiveness of the measurement.

Second, the intermediary effect was tested only through the channel of earnings management, without considering other potential transmission pathways such as the quality of information disclosure; thus, the exploration of the mechanism underlying the risk-revealing effect of audit quality requires further expansion. Finally, the heterogeneity analysis was conducted solely based on the two dimensions of ownership nature and degree of marketization, without considering the influence of factors such as industry characteristics and firm size.

Future research could be further expanded in the following ways: First, optimize the audit quality measurement system by incorporating more dimensional indicators to enhance the precision and comprehensiveness of the measurement; Second, explore additional transmission channels for the risk disclosure effect of audit quality, conducting a comprehensive analysis of the mediating roles of factors such as information disclosure and corporate governance; third, conduct heterogeneity analyses across multiple dimensions-including industry, firm size, and equity structure-to more comprehensively characterize variations in the risk disclosure effect of audit quality; fourth, against the backdrop of the digital transformation of the audit industry, analyze the impact of digital audit technologies on the risk disclosure effect of audit quality, thereby providing more targeted guidance for the development of the audit industry.

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